

CLAIMS

Amend the claims as follows.

1. (Currently Amended) A light guide plate structure comprising:
a light guide plate, comprising at least one light incident surface, a light scattering surface and a light emitting surface, wherein the light incident surface is on a sidewall of the light guide plate, the light scattering surface is on a bottom surface of the light guide plate, and the light emitting surface is on a top surface of the light guide plate, and wherein the light scattering surface has a plurality of notches extending up from underneath the bottom surface of the light guide plate; and
a plurality of transparent element structures associated with the plurality of notches and having solid side walls continuously extending between first and second surfaces so that the first surfaces are within the plurality of notches and the second surfaces are outside the bottom surface of the light guide plate, wherein a refractive index of the plurality of transparent element structures is different from that of the light guide plate.
2. (Previously Presented) The light guide plate structure of claim 1, wherein the plurality of transparent element structures comprises rectangular shaped glass or an acrylic material.
3. (Previously Presented) The light guide plate structure of claim 1, wherein:
the plurality of transparent element structures each comprise flat top ends that extend up into the notches above the bottom surface of the light guide plate and flat bottom ends that extend down underneath the bottom surface of the light guide plate;
the plurality of transparent element structures have different sizes;
the plurality of transparent element structures are disposed on the light scattering surface at least partially in sequence by size; and
the bottom surfaces of the plurality of transparent element structures are substantially coplanar.

4. (Currently Amended) A back light for a display, comprising:

a light guide plate structure, comprising:

a light guide plate, comprising at least one light incident surface, a light scattering surface, and a light emitting surface, wherein the light incident surface is on a sidewall of the light guide plate, the light scattering surface is on a bottom surface of the light guide plate, and the light emitting surface is on a top surface of the light guide plate, and wherein the light scattering surface has a plurality of notches;

a plurality of solid block-shaped transparent element structures disposed within the plurality of notches, wherein a refractive index of the plurality of transparent element structures is different from that of the light guide plate, and wherein the plurality of transparent element structures includes at least one surface that is outside of the plurality of notches and outside of the light guide plate structure; and

a linear light source next to the light incident surface of the light guide plate.

5. (Currently Amended)[[:]] The back light of claim 4, wherein the plurality of transparent element structures comprises a glass or an acrylic material.

6. (Currently Amended)[[:]] The back light of claim 4, wherein the light guide plate is a mesa light guide plate, the plurality of transparent element structures have different sizes, the plurality of transparent element structures are disposed on the light scattering surface at least partially in sequence by size, and bottom surfaces of the plurality of transparent element structures are substantially coplanar.

7.-20. (Canceled)

21. (Previously Presented) The light guide plate structure of claim 1, wherein the first surfaces are adapted to reflect light incident from the light incident surface, and the second surfaces are adapted to reflect light that has transmitted through the first surfaces.

22. (Currently Amended) The ~~back light light guide plate structure~~ of claim 4, wherein the transparent element structures comprise:
flat top ends that insert into the notches above the bottom surface of the light guide plate;
flat bottom ends that extend down below the bottom surface of the light guide plate; and
parallel side walls that extend from the flat top ends to the flat bottom ends.

23. (Currently Amended) The ~~back light light guide plate structure~~ of claim 4, wherein the notches have rectangular shapes and the transparent element structures have rectangular shapes that sit inside the ~~rectangular~~ rectangular-shaped notches.

24. (Currently Amended) The back light of claim 22, wherein the bottom surface extends out away from the light incident surface at an upwardly inclining angle toward the light emitting surface and the bottom surface is located progressively higher up on the parallel side walls of the transparent element structures as the transparent element structures are located farther away from the light incident surface.

25.-28. (Canceled)

29. (Currently Amended) A back light module, comprising:
~~means for attaching~~ a plurality of block-shaped solid and transparent elements attached to inside notches formed on a bottom surface of a light guide plate, wherein the transparent elements have a refractive index different from a refractive index for the light guide plate, and wherein the plurality of transparent elements include at least one surface extending outside of the plurality of notches and outside of the light guide plate;

means for scattering a light against the bottom surface of the light guide plate; and
means for emitting the scattered light up through a top surface of the light guide plate.

30. (Currently Amended) The back light module of claim 29, further comprising means for outputting a linear light source through a light incident surface and against the bottom surface of the light guide plate.

31. (Previously Presented) The back light module of claim 30, wherein the linear light source is a cold cathode fluorescent lamp.

32. (Previously Presented) The back light module of claim 30, wherein the light incident surface forms a sidewall of the light guide plate.

33. (Previously Presented) The plate light source of claim 29, wherein each of the plurality of transparent elements comprises a first solid end extending up into an associated one of the notches in the bottom surface of the light guide plate and a second solid end extending out of the associated one of the notches below the bottom surface of the light guide plate.